

Keeping It Simple Saves Money

By Royden J. Lynch, *COMPUTROLS Inc.*

Although consulting engineers contribute to energy savings when they specify the appropriate building automation system controls for your mechanical equipment, it's the skilled operating engineers who make deep, long-term savings a reality. Operating engineers wear many hats during the average week. They fix plumbing leaks, replace light bulbs, supervise contractors, conduct mechanical preventive maintenance, paint and do administration paperwork. And now, with the purchase of most building automation systems, operating engineers must be computer programmers, too.



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Complicated Systems

Most building automation systems are more complicated and harder to use than they should be. Why? One reason is time to market. It takes time to simplify the use of software, and every manufacturer wants to be first to market. Another reason is return on investment. The more research and development dollars going into software, the more systems that must be sold to reap a profit. And still another, darker reason is that many manufacturers and installation contractors derive a large portion of revenue—and most of their profit—from changes, repairs and maintenance after the initial installation cost. What would that revenue stream become if your building automation system was simple enough to handle in house? Savings.

Imagine if you wanted to calculate on your computer the average cost of light bulbs on your last six orders. You could just use your computer's built-in calculator function, or you could build a quick spreadsheet for future comparisons. Not a big deal, right? But, to make this calculation, let's say you needed to actually write a program in Basic or C++ programming language, or even worse, use a special language made just for your type of computer, then compile it and run it to get your average light bulb cost. This is what most operating engineers must do with many building automation systems if they want to do something this simple or as simple as averaging the temperatures of two offices.


If you had to call a contract programmer every time you needed to compute your light bulb cost, you would just do it by hand. At least 50% of the companies I've called on are defeating their control systems

by doing things manually, such as forcing valves open or disconnecting dampers. After operating this way, before long your building automation system will turn into nothing more than a big time clock and your energy savings will tick away.

Powerful Yet Simple Systems

Don't miss the boat on real long-term energy savings. Buy a powerful control system that your operating personnel do not have to learn a programming language to use. The simpler the system is to use, the greater the contribution operating engineers can make toward lowering energy costs on a daily basis.

A simple control system is less expensive to install, less expensive to learn how to use, less expensive to maintain and less expensive to refine or expand. A simple control system also has fewer hidden costs. The single most important factor governing energy savings produced by a building automation system is how easy a system it is to use.

You must take into consideration all cost savings—not just energy savings—when looking at the big picture of purchasing a control system for your energy management program. When you take all identifiable costs into consideration, don't be surprised if the control system with the lowest initial purchase price is complicated, hard-to-use and requires a larger overall investment during its life. 

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